

REMARKS

The allowance of Claims 14-16 is noted with appreciation. Claims 1-7 are cancelled. Claims 8-13 remain for consideration.

The rejections of Claims 8 and 9 as being anticipated by Hurley et al. under 35 USC § 102(b), of Claims 8-10 and 13 as being anticipated by Reid under 35 USC § 102(b), of Claims 8 and 9 as being anticipated by Gomez et al. under 35 USC § 102(e), of Claims 8 and 9 as being anticipated by Ikenaga under 35 USC § 102(b), and of Claim 11 as being obvious over Hurley et al. in view of Hodges et al. under 35 USC § 103(a), are traversed. Reconsideration of each of these rejections is respectfully requested.

Initially, applicants submit that the acknowledgement in the Office Action that the preamble has not been considered is legally incorrect. The preamble is needed in Claims 8 and 9 to give "life and meaning" to the claimed subject matter. That is, the reference to the gold sulfite plating solution in both the preamble and body of the claims, thereby tying these together, demonstrates that the preamble is necessary to provide context -- life and meaning -- for the detector of Claim 8 and the means of Claim 9. Indeed, these comments clearly reflect applicant's intentions and are an integral part of the interpretational public record. One important piece of evidence of why the preamble is essential is found in the fact that the Reid, Hodges, Ikenaga and Gomez et al. electroplating patents have nothing whatsoever to do with performing gold plating and the particular problems inherent in such plating as recognized by the applicants. Consideration of the preambles will eliminate those patents as alleged anticipatory references and even less relevant Hodges et al. as an alleged secondary reference in a Section 103(a) rejection.

Contrary to any mention in the Office Action that certain references, Hurley et al. aside, relate to electrolytic gold plating, Reid merely discloses a method an apparatus for copper plating, wherein the light absorption across the plating solution is measured by a spectrophotometer to monitor the composition of the solution for controlling the plating process. Nothing relating to the problems of gold plating is mentioned in Reid.

Likewise, Gomez et al. refers only to electrolytic copper plating and implies nothing about gold plating or the monitoring of the plating solution by lighting. Ikenaga describes electrolytic plating for Zn and alloy of Zn-Ni, not gold. The same can be said with respect to Hodges et al.

Claims 8-13 also clearly and patentably distinguish over the Hurley et al. method and system which are applicable to gold plating. However, this reference did not recognize the problem addresses by the present invention as set forth at page 1, lines 21 *et seq.* of the present invention, and thus did not provide a solution to the degradation problem otherwise encountered in non-toxic gold plating using a sulfite plating solution. That is, applicants recognized that as the plating proceeds, deposition of metallic gold occurs. This deposition grows larger into colloidal gold in the beginning of plating are very fine metallic gold particles. This colloidal gold causes abnormal deposition of metallic gold on the surfaces of structural components inside the plating equipment inviting degradation of the gold plating solution. This degradation prevents the plating process from proceeding into proper gold plating.

Applicants then discovered that this problem could be overcome by the application of irradiated light whereby the plating solution is lighted and examined by light intensity to permit a direct evaluation of the degree of degradation of the plating solution attributable to the grow of gold particles.

The Hurley et al. patent discloses degree of degradation in the plating solution in a gold plating process. The system monitors temperature of the plating bath, the liquid level, the pH-value, and the concentration of the plating solution to examine the degree of degradation of the solution. This is an indirect measurement which does not assume stable gold plating. By itself and in purported combination with the Hodges et al. cell, the Hurley et al. patent does not lead to the claimed invention herein.


Accordingly, early and favorable action is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #381NP/50670).

Respectfully submitted,

November 12, 2003



James F. McKeown
Registration No. 25,406

CROWELL & MORING, LLP
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844

JFM/acd
056207.50670US